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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,750	08/15/2007	Bruce Albert Selvey	08270011 AA	3698

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WHITHAM, CURTIS & CHRISTOFFERSON & COOK, P.C.
11491 SUNSET HILLS ROAD
SUITE 340
RESTON, VA 20190

EXAMINER

GONZALEZ, LUIS A

ART UNIT	PAPER NUMBER
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3653

MAIL DATE	DELIVERY MODE
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09/29/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,750	Applicant(s) SELVEY ET AL.	
	Examiner LUIS GONZALEZ	Art Unit 3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,22-35,47 and 48 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,22-35,47 and 48 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>20061006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

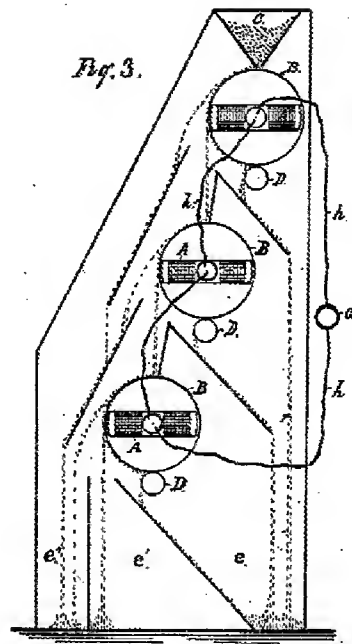
2. Claim 1, 12, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moffatt US 411,899 in view of Knoll US 4,251,353.

With reference to FIG. 3 below, Moffatt teaches a separation device to separate components of a mixture of particulates, said separation device comprising:

means to separate said particulates by magnetic means in association with first (top roll), second roll (directly below top roll);

wherein said first and second roll each produce a magnetic and a non-magnetic output, and wherein said first and second rolls producing a magnetic output, said magnetic output from said first roll proceeding onto said second roll.

Moffatt does not teach wherein said magnetic and non magnetic proceed respectively to a third roll and a fourth roll.



With reference to FIG. 2 below, Knoll teaches the broad concept of using two rolls (referred to as “glass cleaner” and “tailings cleaner”) side-by-side to separate particulates from a top roll (referred to as “rougher”) in order to get a higher purity of glass (which would correspond to the magnetic particles in applicant’s invention) concentrate. The thrown fraction (following the same trajectory as the conductive or non-magnetic particles in applicant’s invention) from the glass cleaner and the pinned fraction (following the same trajectory as the non-conductive or magnetic particles in applicant’s invention) are combined to form a middlings fraction (referred to as “recycle” in figure below), which is then re-fed to further separate the particles even more.

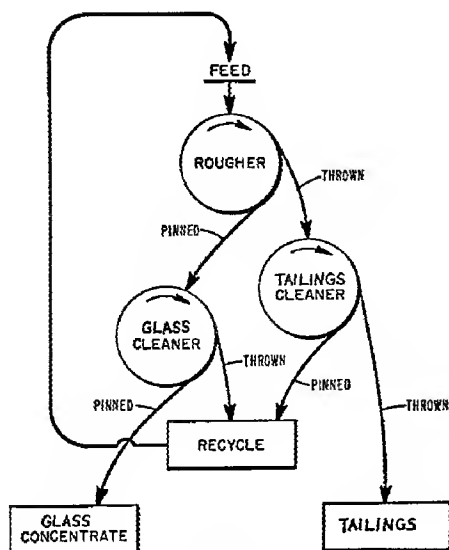
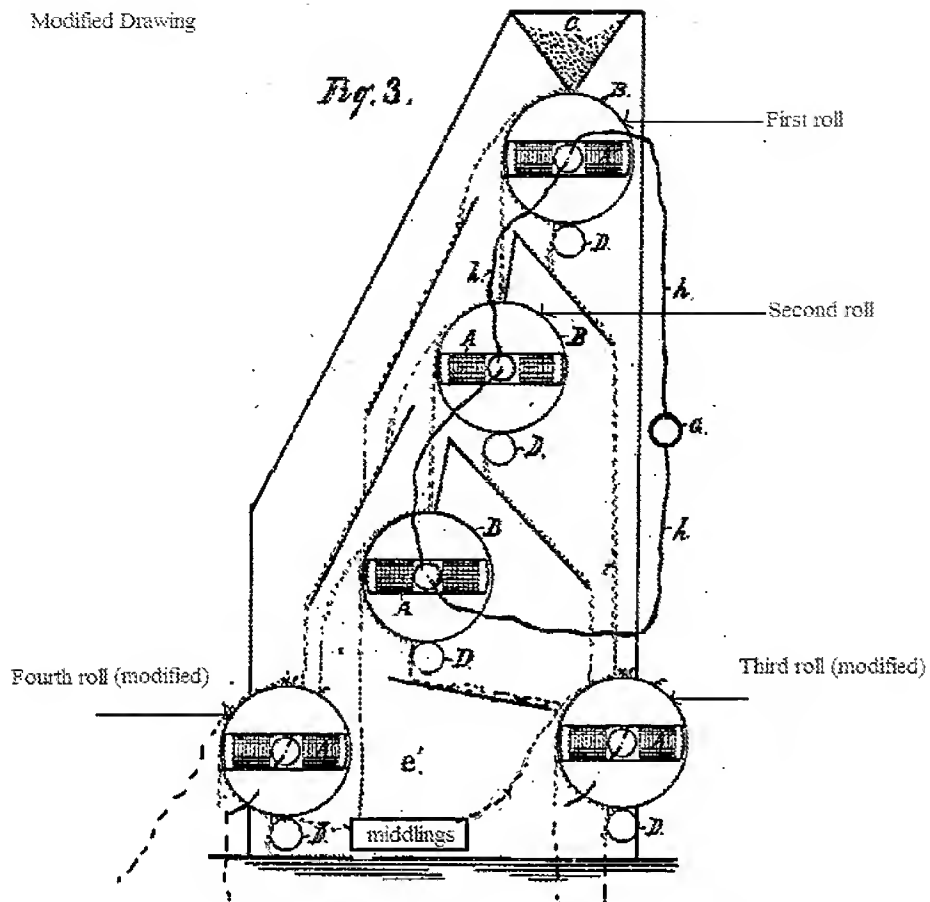


FIG. 2

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moffatt's device to include two side-by-side rolls located below a top roll as taught by Knoll in order to ensure a more thorough separation of magnetic particles from non-magnetic particles. A modified drawing below shows an example of the examiner's combination of Moffatt and Knoll.



3. Claims 4-11, 22-26, 28-35, 47, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moffatt US 411,899 in view of Knoll US 4,251,353, and further in view of Gates US 7,041,925.

Regarding claims 4-7, 22-24, 28, 47 and 48, Moffatt in view of Knoll teaches the claimed invention except for wherein each roll operating solely with electrostatic separation means.

Gates teaches the well-known concept of separating a mixture of particles using an electrostatic separation means (14) (see also applicant's admitted prior art,

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paragraphs [0074]-[0075]) in a separation plant. The electrostatic separation means is made from a conductive material.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute Moffatt's magnetic separation device with the electrostatic separation means as taught by Gates in order to achieve to the predictable result of separating conductive particles from a mix of particles.

Moffatt teaches wherein the first and second roll do not re-treat either of the conductive (non-magnetic) or non-conductive (magnetic) outputs.

Regarding claims 8-11, 29-31, 33, and 35, the combination of Moffatt in view of Knoll and Gates would turn out a mids output from the non-conductive output of the fourth roll, conductive output from the third roll and a mids output form the second roll (see examiner's modified drawing above to get a visual representation).

Regarding claims 25 and 26, Moffatt in view of Knoll does not specifically teach wherein the mids output of said device is fed to a high tension roll (HTR) separator, and wherein a conductive output of the HTR is fed to an electrostatic plate machine.

Gates teaches that three basic types of electrostatic separators are conventionally employed for mineral separation, which includes: HTR, electrostatic plate (ESP), and triboelectric separators. The three basic types are often not present alone in any mechanism. It is well known to use HTR's to separate finer particulate materials, while it's more suitable to use ESP's to coarser particulate materials. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Moffatt's device with an HTR separator and ESP as taught by Gates to achieve the

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predictable result of separating finer particulate material. Specifically adding the middlings to the HTR would render more effective separation results of finer particulate material. Adding an additional separator, such as an ESP to the conductive output of the HTP would achieve the predictable result of separating coarser particulate material.

Regarding claims 32 and 34, though Gates shows three outputs (conductive, mids, and non-conductive), two outputs are also conventional as admitted by applicant's prior art of FIG. 1.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUIS GONZALEZ whose telephone number is (571)270-3094. The examiner can normally be reached on M-F 9:30-6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick H. Mackey/
Supervisory Patent Examiner, Art
Unit 3653

LAG